

What is claimed is:

1. A reflecting mirror comprising a plastic substrate, and a stacked structure formed on the plastic substrate, the stacked structure including:

an underlayer film made of aluminum oxide ( $\text{Al}_2\text{O}_3$ );

a reflection film formed on the side opposite to the plastic substrate with respect to the underlayer film; and

a water-repellent film having a compound containing fluorine and silicon, which is formed on the side opposite to the underlayer film with respect to the reflection film.

2. A reflecting mirror according to claim 1, wherein the reflection film is made of silver (Ag) or aluminum (Al).

3. A reflecting mirror according to claim 1, wherein the water-repellent film has a physical film thickness of not less than 1 nm nor more than 10 nm.

4. A reflecting mirror according to claim 1, wherein the underlayer film has a physical film thickness of not less than 40 nm nor more than 200 nm.

5. A reflecting mirror according to claim 1, wherein the stacked structure further includes a reflectance adjusting layer sandwiched between the reflection film and the water-repellent film.

6. A reflecting mirror according to claim 1, wherein the stacked structure further has a protective film containing silicon monoxide ( $\text{SiO}$ ), which is sandwiched between the reflection film and the water-repellent

film and located closest to the water-repellent film.